

Australian Archives - Preserve Your Valuable Electronic Records

by Dagmar Parer

As in other countries Australian government agencies have been using computers to create, manipulate and store electronic records since the early 1960's. Since the 1980's there has been a dramatic increase in the use of mainframe/midrange and personal computers to a point where now some agencies are planning to maintain and manage major information holdings exclusively in an automated environment.

Information technology can offer agencies efficiencies in work practices but unless the electronic records created and used are managed appropriately over time an agency could lose valuable operational information in the short term and its corporate memory in the long term.

Australian Archives, established by the *Archives Act 1983*, is responsible for the broad management of the whole body of records of the Commonwealth government. The objectives of the *Archives Act* are to identify and safeguard records of ongoing value to the Commonwealth Government, and to the community. Records of value assist the Government in responding to issues of national interest, in assisting the public, and in ensuring that ongoing rights and obligations of the Government and the people are met. Records of value also ensure that the business of government operates efficiently.

The *Archives Act* provides the powers to ensure that there are processes in place to achieve consistent selection of valuable records as well as their ongoing integrity, and to allow for their efficient control, accessibility and maintenance, firstly by those agencies that created them and then by the Archives. To ensure good administrative practice in dealings with records, the Archives develops policies and procedures that are implemented by all Government agencies.

In recognition that appropriate management practices are needed for all forms of Commonwealth records the Archives has worked towards developing policy on the management of electronic records irrespective of whether they reside in a mainframe or PC environment.

The objectives set for such policy were:

- That records or data elements of permanent value held within automated systems are identified in clear and unambiguous ways.
- That the internal management of automated systems accommodates the identification and tracking of records or data elements in electronic format as long as they have value.

- That records or data elements in electronic format are preserved for as long as they are needed.
- That provision of long term access be provided to permanent value records or data elements in electronic format.

Investigations have focused on how these objectives could be achieved in relation to appraisal, management and access.

The Archives has developed a set of appraisal procedures based on the standards used for other media but modified to account for the unique characteristics of electronic records. These criteria have been successfully used to appraise a number of large Commonwealth mainframe systems and disposal schedules have been written to cover the records on those systems. Appraisal now focuses on examining the entire functionality and value of the overall system and its component databases in order to identify electronic records of permanent value. This is done not in isolation from other records created by the agency, but in a holistic way.

The Archives has also examined the issue of provision of long term access to electronic records once they have been identified as being of value. A number of access models have been proposed. We are presently examining these in detail to assess their suitability and gauge their cost effectiveness.

Predominantly the models being considered involve transfer of permanent value records into the custody of the Archives with the organisation assuming responsibility or subsequent access, however one model proposes that valuable records remain in the custody of the creating agency and the agency assumes responsibility for provision of subsequent access to those records. This model is referred to as the networked access model. It proposes that users would gain access to records via network facilities over which Archives would maintain intellectual control and provide directory services. The technical feasibility of providing the necessary communications infrastructure to support remote on-line access to archived electronic records held in agency custody has been explored. In the short or medium term a gateway product is the likely technical solution for the communications infrastructure required. Other aspects of the model such as provision of a common access user interface, cost effectiveness and security need further serious consideration. General acceptance of this model by clients also needs to be canvassed.

In addition to developing and testing appraisal criteria and undergoing investigations in development of transfer and subsequent access models, the Archives has been placing its prime focus on developing policy to ensure that records identified as being of permanent value on an agency database or PC network are managed according to archival requirements so as to ensure their survival over time. It is equally important that associated contextual and descriptive information also survives so that irrespective of where records custody ultimately lies, the records still exist, are described and can be accessed.

Investigations by the Archives into management procedures for electronic records held in mainframe and PC environments in Commonwealth agencies have disclosed a disturbing trend. With the increased use of information technology, work practices in agencies have changed and a shift of control over the record has occurred from the record manager to the records creator. For many officers registry files are no longer seen as a necessity but as an overhead, control of records has been devolved and the subsequent effect of that can be a diminishing degree of control over corporate information.

If the record creator makes a paper copy of a computer generated record and sends it to the registry, record management controls still apply. However central registry control is no longer the norm and control responsibilities often rest with devolved registries or more commonly now with the creating officer or work group.

Agencies need to recognise the valuable role information plays in the successful operation of the business and to redress any trends that diminish their control over this vital asset.

Commonwealth agencies in Australia are becoming aware of the necessity to not only manage their mainframe or PC records according to accepted IT management practices but to also manage them according to records management and archival principles. Agencies are aware of the impact the PC is making on work practices and want to redress any negative effects on records management arising from devolution and hence are looking to Australian Archives for advice and guidance.

The Archives in developing its position has liaised with several client agencies, has examined information management philosophies and practices already in place and has sought to augment established practices with archival requirements.

The policy principle the organisation is now requesting agencies to adopt is:

Preserve Your Valuable Electronic Records

The policy principle is composed of four Australian archives requirements:

- Appraisal of electronic records,
- Monitoring and management over time,
- Compliance with disposal authorities, and
- Access over time.

This principle covers all forms of electronic records from word processing documents to transaction records of an on-line transaction processing system. However an agency's approach to implementing the principle of electronic records management will vary depend-

ing on the controlling environment for the electronic records. Most agencies have different disciplines for controlling records in computer application systems than for records created using personal computers.

The principle is to be adopted by Commonwealth agencies irrespective of size or technological development. Within a mainframe environment the principle is likely to be administered by the information technology support area of an organisation whereas with PC generated records the principle is more likely to be implemented by an information management area.

Appraisal of Electronic Records

When document management systems or mainframe transactional databases are being designed Australian Archives is urging agencies to identify categories of records that have ongoing value. This will be done by consideration of the Archives' standard appraisal criteria, but in a way that is tailored specifically to the electronic environment.

Valuable records need to be identified early on in the process so that the procedures required to manage, and ensure the survival of these records, can be built into the system.

The appropriate point for application of the Archives appraisal criteria is when the data requirements have been agreed upon but before the detailed specifications of the system has commenced.

Agencies will also be reminded that systems already in existence will need to be appraised when they are re-developed, a process that happens to most major systems within a 10 year time frame. If existing systems hold information of national value they should be appraised prior to re-development.

The final assessment of the value of electronic records by an agency and the Archives will result in the issuing of a disposal authority. The disposal authority will identify the length of time electronic records need to be kept, as well as authorising destruction of redundant records. Some savings may be achieved if archiving needs are assessed at a global or corporate level rather than only at a system-by-system level.

Monitoring and Management Over Time

It is essential that electronic records of value and their associated contextual information be monitored and managed over time whilst those records are resident on agency databases or document management systems irrespective of whether those records are held on live or separate archival databases.

Record managers have been responsible for specifying how paper records are described, stored, distributed and managed whilst in agency custody. In Australia, record managers and archivists, are only beginning to specify similar practices for electronic records. Up till now it has been the domain of the IT professional or data administrator to set management practices for electronic records. Practices set have usually been restricted to management of electronic records held on mainframe systems and have been documented in agency Data Management Principles statements, giving upper level management directives outlining management objectives, or in system specific operational instructions.

Archives are endeavoring to identify, and then provide guidelines to agencies on, additional management practices required to ensure the archival component of their holdings is managed appropriately. These guidelines or additional management practices should then be incorporated into the agencies' Data Management Principles, system specific documentation or overall information management plans. An obvious management practice the Archives will require is that agencies migrate electronic records of value across system upgrades. Relevant system and software documentation would also need to be maintained. Another is that agencies take into consideration the requirements of the Archives Act during changes to agency software and hardware platforms if those changes affect the management of, or description of, valuable electronic records or their retention periods. Major system changes could mean that a new disposal authority needs to be issued or changes made to an old one.

Additionally it may be required that agencies design audit trails into their systems to monitor changes to electronic records of particular value.

The Archives has recently written a draft disposal authority covering the electronic records of the Department of Immigration and Ethnic Affairs. The disposal authority covers some 18 functional computerised systems in the department and identifies permanent value electronic records that need to be kept for substantial periods of time. The Archives has also been invited to work with the Australian Taxation Office in exploring the option of having a single disposal authority organised on a function basis to cover all records including a substantial holding of electronic records.

The Archives, in developing disposal schedules that cover the major electronic record holdings of these two agencies, is using this exercise as a case study to further its understanding of records management practices required in an automated system. Ultimately, from this experience, the Archives will be in a better position to be able to define management strategies or practices that agencies will need to adopt in respect to the management of their records of value.

Though agencies to varying degrees have addressed management issues in the mainframe environment, few have addressed issues concerning management of electronic records in a PC environment, often referred to as electronic documents. The Information Exchange Steering Committee's (IESC's) Electronic Data Management Subcommittee, of

which the Australian Archives is a member, is a body which has examined strategies and practices best suited for the management of electronic documents. The Subcommittee in its report *Finding Information Needles in Government Haystacks: A Report on Electronic Document Management in Australian Government Agencies*,¹ outlined results found after surveying a number of government agencies on issues affecting the successful management of electronic documents, which were that:

- Management of electronic documents is generally within the province of each individual agency.
- Management of electronic documents is generally uncoordinated within the agency.
- Agencies are at different levels of maturity in implementing office automation.
- Management focus has been on selecting appropriate hardware and software and not on records management practices.
- Often no clear line of responsibility for management of these records has been established.
- There is a lack of understanding by staff of the legal issues associated with electronic records management and of their impact.
- Variable quality of records within agencies has been translated to the electronic environment.
- Generally more staff training in system use and understanding of system facilities is needed.

Taking these survey findings into consideration the Subcommittee in its subsequent report *Guidelines for the management of electronic documents in the Australian Public Service*² proposed that

agencies base their own policies and procedures on the following principles:

- Information is managed according to its use
- Information is managed according to its life cycle
- Information is managed according to its value to the agency.

A management strategy proposed in the report, is that agencies assess electronic documents and categorise them as being of personal, work group or corporate value to the or-

1 Electronic Data Management Sub-Committee for the Information Exchange Steering Committee, *Finding Information Needles in Government Haystacks: A Report on Electronic Document Management in Australian Government Agencies*, Canberra, 1991

2 Electronic Data Management Sub-Committee for the Information Exchange Steering Committee, *Guidelines for the management of electronic documents in the Australian Public Service*, Canberra, February 1993

ganisation. Electronic documents categorised as being of corporate value should then be registered, which identifies them as being "a record of the substantive business of the agency," and then be managed through the assignment of key document attributes.

The key document attributes identified in the report allow a document to be uniquely identified and allow the document content and a certain level of the document context to be described. Using key document attributes as a management tool in a PC environment is an attempt to transfer record management criteria used in the management of paper records into an automated environment. Australian Archives is examining these key document attributes and is likely to supplement them to ensure that archival requirements are fully met.

The Archives as part of its policy principle 'Preserve Your Valuable Electronic Records' advocates that electronic records of value should be managed whilst resident on agency systems. In its endeavor to find appropriate management guidelines the Archives has investigated electronic record management practices being employed or planned for by agency clients, and has worked with the IESC in its investigations. This experience has shown that though the Archives advocated the one principle and its four components, it perceives that different guidelines will be required for the management of different types of records. The Archives is therefore planning to produce guidelines for:

- E-Mail and word processing documents where a paper filing systems exist.
- E-Mail and word processing documents where a paper filing system does not exist.
- Informational databases and records in integrated functional management systems.
- Records in multi-media systems.
- Transactional processing records and functional support systems.

Also contained within the Monitoring and Management component of the "Preserve Your Valuable Electronic Records" principle is the requirement that not only does the record content need to be preserved and managed but the contextual information associated with that record needs to be managed as well. The Archives has a context control and descriptive framework which indicates the existence of records including electronic records. To this end, work is proceeding to identify effective ways to describe electronic records and incorporate those descriptions into the Archives' structural finding aids.

Compliance with Disposal Authorities

The requirement Archives has in this component of the principle **Preserve Your Valuable Electronic Records** is that agencies comply with a disposal authority once it is in place as it is a legal instrument. No valuable electronic records should be destroyed. Agency IT users and designers are custodians of Commonwealth information and legally cannot dispose of electronic records without endorsement of the Australian Archives in the form of an authorised disposal authority.

Much of the success of the compliance principle depends on the extent to which this concept can be built into the agency's information management policy and procedures and into the design of systems used within agencies. Compliance with archiving requirements can be made more effective and efficient if the process is as automated as possible. This might mean holding the archiving rules and retention requirements within a system itself and having the system automatically identify and maintain the permanent value records and destroy the rest when it is no longer needed for current business requirements.

Access Over Time

The last though important requirement Archives has incorporated into the principle **Preserve Your Valuable Electronic Records** is for agencies to ensure that access can be provided to permanent value records held within their custody. Agencies must allow for provision of short term access to meet immediate business requirements and long term access, including public access, to permanent value electronic records in their custody.

Here it is assumed that if a record is being kept, it is being kept so it can be used in the future. Agencies will need to ensure that electronic records of value can be accessed now and in the future. Agency IT staff and PC users cannot continue interpreting 'archiving' to only mean 'removing documents' that are no longer of immediate value, they need to become aware of and abide by the fact that the Archives Act assures statutory right of public access to government information (with exemptions) once that information is 30 years old. Some agencies have made archive storage and retrieval a part of their total information management environment and this is a positive step.

Conclusion

The Australian Archives is committed to developing policy for the management of electronic records of value and to encouraging all agencies to develop good, agency-wide information management plans which incorporate set archival requirements. Australian Archives at present is building up invaluable experience by liaising with agencies on electronic record management matters and in developing disposal schedules that cover substantial holdings of electronic records. Our aim in the near future is to produce management guidelines for certain record types and to continue with the work in progress evaluating custody, transfer and access options available to us.